2. Claims 4-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hake et al. in view of Dillow et al. as applied to claim 1 above, and further in view of Livingston et al.

Applicants respectfully traverse.

Claim Rejections - 35 U.S.C. § 103

1. Claims 1-3, 8 And 9 In View Of Hake et al. And Dillow et al.

In rejecting claims 1-3, 8 and 9 in view of Hake et al. and Dillow et al., the grounds of rejection state:

> Hake et al. discloses a cable with at least one transmission element, which is surrounded by a sheath of insulation material, wherein the sheath comprises an inner layer (18) and an outer layer (20), wherein the inner layer and outer layer are made of the same base material, and wherein the values for tensile strength and elongation at break of the inner layer are significantly lower than those of the outer layer as a result of additives being included into the base material of the inner layer (re claims 1 and 8).
>
> Hake et al. does not specifically disclose the inner and outer layers being firmly bonded together when the outer layer is extruded around the inner layer. Dillow et al. discloses a cable sheath comprising an inner layer and an outer layer, wherein the inner and outer layers being firmly bonded together without a separate adhesive therebetween when the outer layer is extruded around the inner layer. It would have been obvious to one skilled in the art to apply the teaching of Dillow et al. in the cable sheath of Hake et al. to facilitate stripping of the composite insulation from the conductor (re claims 1, 8 and 9).
>
> Re claims 2 and 3, Hake et al. discloses that the two layers of the sheath being of approximately the same thickness or between 60:40 and 40:60.

Office Action at pages 2-3.

As emphasized throughout the Manual of Patent Examining Procedure, the prior art references applied must teach or suggest all the claim limitations. MPEP §§ 706.02; 2142; 2143;

2143.03. If the references fail to do so, a prima facie case of obviousness is not established. Applicants submit that, under this correct standard of obviousness, as reflected in the above MPEP provisions, the grounds of rejection do not establish a prima facie case of obviousness of the claimed invention for the reasons discussed below.

As explained in Applicants' Amendment of June 13, 2002, the present invention is directed to a cable having a core surrounded by a sheath of insulation material from which the sheath can be stripped without the risk of damaging the core. See Specification at page 2, lines 6 to 8.

As recited in independent claims 1 and 9, this objective is achieved according to the invention with a sheath that comprises two layers of materials that are firmly bonded together when the outer layer is extruded around the inner layer. See Specification at page 4, lines 3 to 4. Accordingly, in the present invention an adhesive intermediate layer is not needed or even desired.

Claims 1 and 9 also require that the values for tensile strength and elongation at break of the inner layer are significantly lower than those of the outer layer.

In one preferred embodiment as recited in new claim 8, the two layers are made of the same base material. See also Specification, paragraph bridging pages 3 to 4. That is achieved with the same base materials by mixing additives into the material of the inner layer (line 1 and 8-11 on page 4).

A unique effect of such a cable construction is that both layers of the sheath in the completed cable form a uniform sheath that can be easily removed by cutting only the outer layer

and then stripping the complete sheath by pulling in the longitudinal direction of the cable. See Specification, paragraph pages 5 6. Because of its unique construction, the inner layer will tear off during this action.

Contrary to the grounds of rejection, however, Hake et al. does not describe a cable with a sheath of insulation material that comprises only two layers as recited in Applicants' claims. The conductor of Hake et al. is coated with three layers 16, 18 and 20 (Figs. 1 and 2). The conductor of Hake et al. is coated with enamel compositions that incorporate a corona resistant filler (see Field Of The Invention). The intermediate layer 18 comprises alumina particles dispersed in a polymeric binder (see column 4, lines 21 and 22). The first layer 16 helps prevent the second (intermediate) layer 18 from cracking and/or delaminating (see column 3, lines 39 and 40). The outermost layer 20 in combination with the first layer 16 protects the intermediate layer 18 and also contributes to the electrical and thermal properties, as well as to the impact resistance, scrape resistance, and windability of the cable (see column 3, lines 48 to 54). Hake et al. is entirely silent regarding the tensile strength and elongation at break, or even the easy removal of an inner layer of a sheath. Indeed, there is no disclosed basis for concluding, as the grounds of rejection do, that "the values for tensile strength and elongation at break of the inner layer are significantly lower than those of the outer layer as a result of additives being included into the base material of the inner layer." Therefore, Hake et al. cannot be relied upon for this feature, and the reference as a whole clearly does not provide any teaching or suggestion in the direction of Applicants' invention.

Dillow et al. does not make up for the lack of disclosure in Hake et al. The insulated conductor of Dillow et al. has an inner layer of a plasticized Polyvinylchloride (PVC) composition and an outer layer of a plasticized, irradiation crosslinked PVC composition. These layers are bonded by extrusion (abstract). Therefore Dillow et al. teaches a metallic conductor with a two layer insulation in which the two layers are bonded, nothing more.

Dillow et al. describes a universal type of insulated conductor that can be used in many applications requiring loose wire, such as in central offices, homes, and the like, and that can be wrapped, soldered, or used with insulation displacement connectors (see column 2, lines 59 to 63). For these purposes, the outer layer (by irradiation crosslinking), for example, has a low coefficient of friction (see Abstract). As a result, the percent elongation property of each of the (two) adhered layers is substantially identical (see column 3, lines 18 to 20). This fact is in stark contrast to the present invention in which the value of elongation at break of the inner layer of the insulation is significantly lower than that of the outer layer, and, therefore, would teach away from the present invention. Again, the tensile strength of the two layers of the sheath is not mentioned by Dillow et al.

Thus, Dillow et al. has nothing to do with the present invention. One skilled in the art faced with Hake et al. and Dillow et al. clearly could not have arrived at Applicants' invention. Each of these references lacks critical teachings or suggestions, such that, even if combined, they could not have taught or suggested Applicants' claimed invention, but at best would have taught away from the present invention, given the disclosure in Dillow et al.

In view of the foregoing, Applicants kindly request the Examiner to reconsider and withdraw the prior art rejections of independent claims 1 and 9, and claims 2 and 3, at least by reason of their dependencies.

2. Claims 4-7 In View Of Hake et al., Dillow et al. and Livingston et al..

In rejecting claims 4-7 in view of Hake et al., Dillow et al. and Livingston et al., the grounds of rejection state that

> Livingston et al. discloses a cable comprising a sheath which comprises an inner layer (28) and an outer layer (30), wherein the values for tensile strength and elongation at break of the inner layer (28) are significantly lower than those of the outer layer (30) (see the C&M document attached herewith, etc. the inner layer being polyethylene and the outer layer being PVDF).
>
> Livingston et al. also discloses the tensile strength of the inner layer being approximately half of that of the outer layer and being about 20 N/mm^2, the elongation of the inner layer being no more than approximately one third of that of the outer layer and being about 150%. It would have been obvious to one skilled in the art to apply the teaching of Livingston et al. in the cable sheath of Hake et al. such that the cable is stable at moderately high temperatures.

Office Action at pages 3 and 4.

Without commenting on the merits of the Examiner's position with respect to the additional features recited in claims 4-7, Applicants respectfully submit that these claims are allowable at least by reason of their respective dependencies.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,

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